

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

LISTING OF CLAIMS

Please cancel claims 2, 17 and 21 in this Amendment without prejudice or disclaimer of the subject matter therein and amend claims 1, 3-6, 9-14, 18, 20, 22, 26 and 27 as follows:

1 1. (Currently amended) A stapling device with two or
2 more stapling heads for stapling sheet-like material, wherein
3 the improvement comprises a staple carriage having at least
4 two or more stapling heads wherein at least one stapling head
5 (4, 5) is adjustable to the other and one a staple head drive
6 unit (9, 10, 45, 46) is provided for setting the distance
7 between the stapling heads (4, 5) and a clincher assembly
8 having at least two clinchers (13, 14) with a clincher drive
9 unit (19, 20, 45, 46) for adjusting at least one clincher and
10 a clamping device (34, 35, 36, 37) wherein said two clinchers
11 and said two or more stapling heads move longitudinally in
12 substantially synchronous movement with said sheet like
13 material during stapling and said clamping device includes a

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

14 pressure component (34, 35, 36, 37) to exert a force
15 perpendicular to the shifting direction of the corresponding
16 said at least one stapling head or said at least one clincher.

1 2. (Canceled)

1 3. (Currently amended) The stapling device according
2 to Claim 1 ~~further comprising clinchers~~ wherein said two or
3 more stapling heads (4, 5) and or said at least two clinchers
4 (13, 14) are movably disposed in a guide (8, 17, 18).

1 4. (Currently amended) The stapling device of claim 1
2 or 2 or 3 wherein said clincher drive unit (9, 20, 29, 30, 45,
3 46) is electrically, electronically, pneumatically or
4 hydraulically actuated.

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

1 5. (Currently amended) The stapling device of claim 1
2 ~~further comprising wherein said~~ clinchers (13, 14), and a said
3 clincher drive unit 22 is coupled to a said stapling head
4 drive unit (12) for said at least one stapling head (4, 5).

1 6. (Currently amended) The stapling device of claim 1
2 ~~further comprising wherein said at least two or more~~ clinchers
3 and a ~~linear guide~~ (8, 17, 18) for said two or more stapling
4 heads include a linear guide and said two or more clinchers.

1 7. (Previously presented) The stapling device of claim
2 1 further comprising a guide (8) rigidly joined with said
3 staple carriage (2).

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

1 8. (Previously presented) The stapling device of claim
2 7 wherein said guide is a linear guide supported against said
3 staple carriage (2) along substantially the entire length of
4 said linear guide.

1 9. (Currently amended) The stapling device of claim 1
2 ~~further comprising two or more clinchers and wherein said~~
3 clincher drive unit is a spindle drive (9, 10, 19, 20) for
4 setting the distance between said two or more stapling heads
5 (4, 5) and said two ~~or more~~ clinchers (14, 15).

1 10. (Currently amended) The stapling device of claim 1
2 or 2 3 further comprising a position sensor for at least one
3 stapling head position or at least one clincher position.

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

1 11. (Currently amended) The stapling device of claim 1
2 or ~~2~~ 3 further comprising a reference position on said at
3 least one stapling head or said at least one clincher.

1 12. (Currently amended) The stapling device of claim 1
or ~~2~~ 3 further comprising a position controller.

1 13. (Currently amended) The stapling device of claim ~~2~~
2 3 further comprising a collision sensor.

1 14. (Currently amended) The stapling device of claim ~~2~~
~~2 further comprising a 1 wherein said clamping device includes a~~
3 locking device (34, 35, 36, 37) for said at least one stapling
4 head (4, 5) ~~and~~ or said at least one clincher.

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

1 15. (Previously presented) The stapling device of claim
2 14 further comprising a drive for actuating said locking
3 device.

1 16. (Previously presented) The stapling device of claim
2 15 wherein said drive for actuating the locking device is
3 electrically, pneumatically or hydraulically actuated.

1 17. (Canceled)

1 18. (Currently amended) The stapling device of claim 17
2 1 wherein the clamping device includes a clamping component
3 (29) fixed relative to the staple carriage (2).

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

1 19. (Previously presented) The stapling device of claim
2 18 wherein said clamping component (34, 35, 36, 37) is
3 moveable and is connected to said at least one stapling head
4 (4, 5).

1 20. (Currently amended) The stapling device of claim 3
2 ~~further comprising clinchers wherein said at least one~~
3 clincher and a clamping device ~~wherein said clamping device is~~
4 separate from ~~the~~ a guide (8) for moving the stapling heads.

1 21. (Canceled)

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

1 22. (Currently amended) The stapling device of claim 21
2 1 wherein said pressure component for said clamping device is
provided by a pressure piston (14, 35, 35, 37).

1 23. (Previously presented) The stapling device of claim
2 15 wherein said drive includes a force transmission device
3 (38, 39).

24. (Canceled)

25. (Canceled)

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

1 26. (Currently amended) A stapling device comprising a
2 ~~staple carriage with two or more stapling heads, said staple~~
3 ~~carriage having a longitudinal synchronous movement with a~~
4 ~~transporting unit of a gather stapler, said staple carriage~~
5 ~~having a stapling head unit for stapling said sheet-like~~
6 ~~material wherein the distance between said two or more~~
7 ~~stapling heads is adjustable relative to each other, and at~~
8 ~~least one stapling head (4, 5) is moveable and one drive unit~~
9 ~~(9, 10, 45, 46) is provided for setting the distance between~~
10 ~~the stapling heads (4, 5) with at least two stapling heads for~~
11 stapling sheet-like material, wherein the improvement
12 comprises a staple carriage having said at least two stapling
13 heads wherein at least one stapling head (4, 5) is adjustable
14 to the other and a staple head drive unit (9, 10, 45, 46) is
15 provided for setting the distance between the stapling heads
16 (4, 5) and a clincher assembly having at least two clinchers
17 (13, 14) and a clincher drive unit (19, 20, 45, 46) wherein at
18 least one of said two clinchers is moveable to the other and a
19 position sensor for at least one stapling head position or at
20 least one clincher position and said at least two stapling
21 heads and said clincher assembly move longitudinally in
22 substantially synchronous movement with said sheet like
23 material during stapling.

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

1 27. (Currently amended) A stapling apparatus
2 comprising:
3 (a) a moveable staple carriage;
4 (b) at least two stapling heads adjustable relative to
5 each other having a drive unit for setting the distance
6 between said at least two stapling heads, said at least two
7 stapling heads disposed on said moveable staple carriage; and
8 (c) a linear guide for moving said moveable staple
9 carriage synchronously with material to be stapled device with
10 at least two stapling heads for stapling sheet-like material,
11 wherein the improvement comprises a staple carriage having
12 said at least two stapling heads wherein at least one stapling
13 head (4, 5) is adjustable to the other and a staple head drive
14 unit (9, 10, 45, 46) is provided for setting the distance
15 between the stapling heads (4, 5) and a clincher assembly
16 having at least two clinchers (13, 14) and a clincher drive
17 unit (19, 20, 45, 46) wherein at least one of said two
18 clinchers is moveable to the other and a position sensor for
19 at least one stapling head position and at least one clincher
20 position and said at least two stapling heads and said
21 clincher assembly move longitudinally in substantially

THOMAS GERLACH and DIRK DRÖGE
U.S. Patent Application S.N. 10/717,543

22 synchronous movement with said sheet like material during

23 stapling.